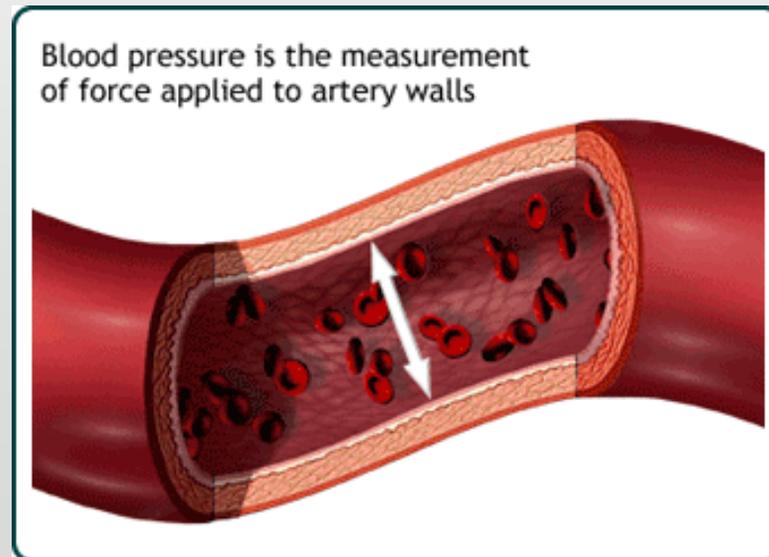


# Blood Pressure and BMI



# Blood pressure is

- The force that blood exerts against the walls of an artery
- Measured in mmHg, millimeters of mercury
- normal is less than 120/80 mmHg

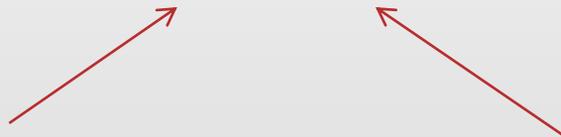


# BP Reading has two parts

- **Systolic (top number):** measures the force of blood while the heart is contracting
- **Diastolic (lower number):** measures the force of blood while the heart is resting
- **Por ejemplo: 120/80**

• **sistólica**

• **diastólica**



# Why we check BP

- Lots of people have high blood pressure or hypertension
  - 30% of adults in US
  - 26% of our farmworker patients in NC
- High blood pressure increases risk of
  - Stroke
  - Heart attack & heart failure
  - Peripheral arterial disease (lack of blood flow to feet)
  - Kidney damage
  - Eye damage

# Symptoms of presión alta:

# Seldom are there symptoms

- **Headache**
- **Changes in vision**
- **Often no symptoms until heart attack or stroke symptoms**

# Emotional symptom

- Denial
  - El matador silencioso

# Low blood pressure

- A cultural difference
- A common complaint among our pts
- U.S. belief:
  - Very rarely an issue
  - Could cause dizziness
  - Rarely could cause fainting
  - Not dangerous
  - Young people usually tolerate easily

# Why we check BP accurately

- **Providers use your measurement to decide on treatment**
  - Need 3 elevated readings to diagnose hypertension
- **Doing it well will decrease your work**
- **Inaccurate blood pressure readings**
  - More work for clinic
  - More work for you
  - Risk to patient

# Uncontrollable things that can temporarily raise BP (give inaccurately high reading)

- Being tired
- Pain
- Recent strenuous activity
- Illness
- Stress

# Controllable things that can temporarily raise BP (give inaccurately high reading)

- Activity before taking blood pressure
- Incorrect positioning (arm below heart level)
- Cuff too small
- Alcohol consumption
- Talking during measurement

# Inaccurately Low Reading

- Cuff too large

# Rest!!

- **FIVE FULL MINUTES**
  - It's hard to get people to rest for 5 minutes
  - Have a strategy
    - If initial measurement is high, repeat after 5 minutes of sitting quietly

# Proper Positioning/La Postura

## LA POSTURA

Para que la posición adoptada sea correcta, ésta debe permitir el reposo psicofísico.

El manguito debe colocarse a la altura del corazón y a uno o dos centímetros por encima del codo

Se debe apoyar bien la **espalda** sobre el respaldo

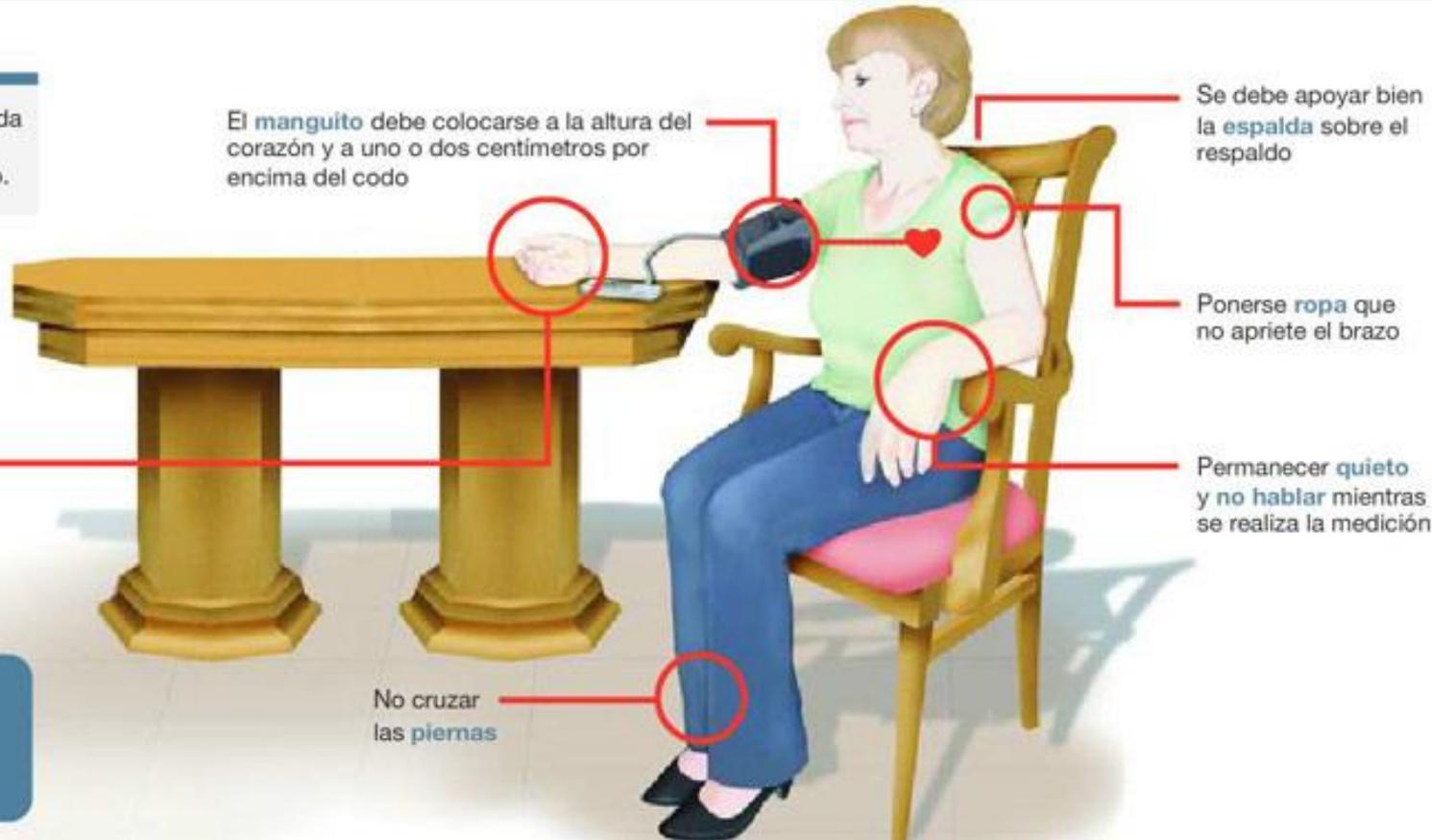
Ponerse **ropa** que no apriete el brazo

Permanecer **quieto** y no hablar mientras se realiza la medición

El brazo ha de reposar inmóvil sobre la mesa

Se recomienda **reposar sentado** al menos durante los 5 minutos previos a la medición.

No cruzar las piernas



# Positioning

- Sit up straight
- Back resting against something
- Feet flat on floor!!
  - Crossed ankles or legs raise BP
- Arm resting on something
- Arm at level of the heart
- Palm facing up
- No talking

# The cuff

- Right size
- Calibrated
- Clean
- An inch above the elbow crease
- Marker over brachial artery

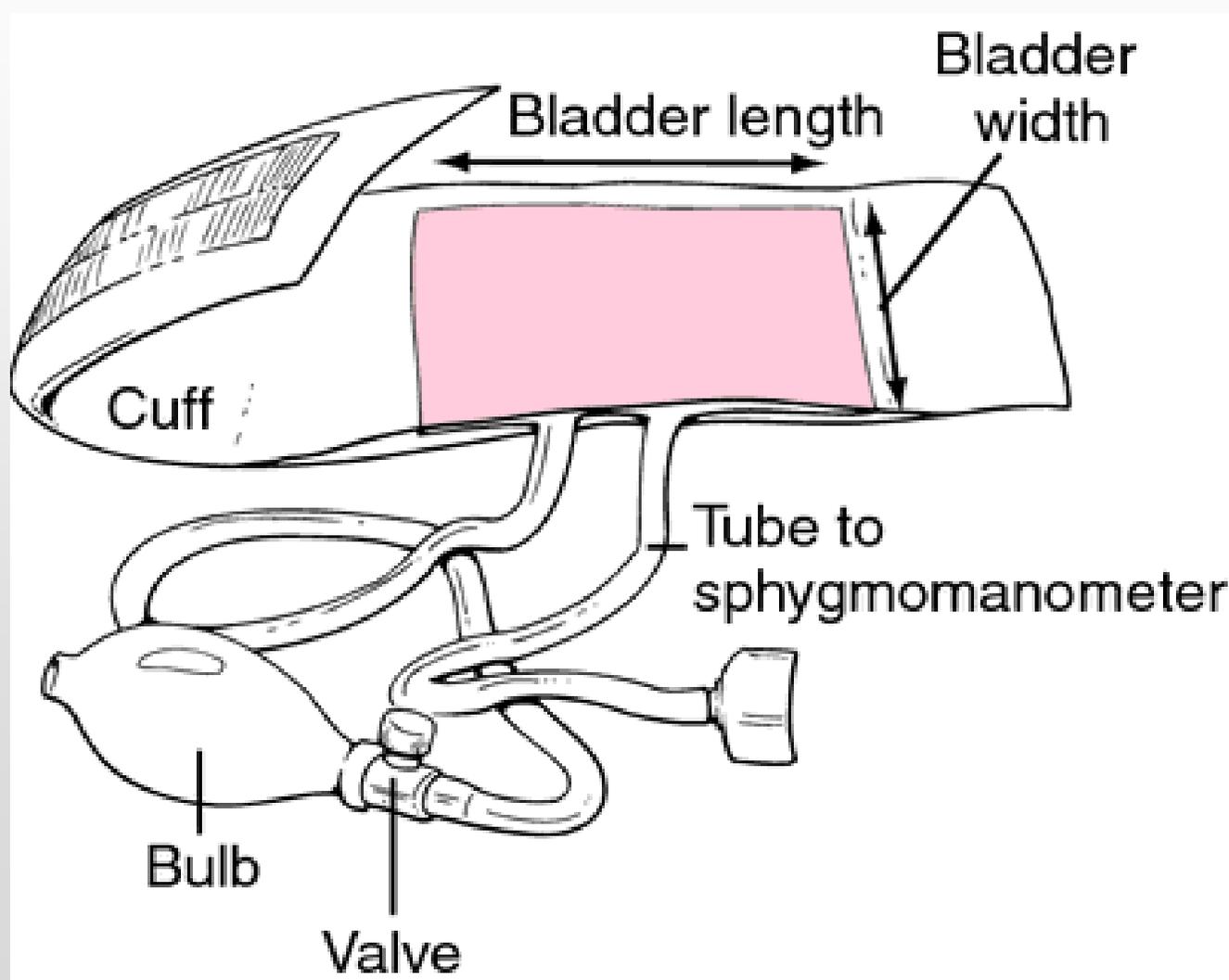
# Automatic cuff

- Press start



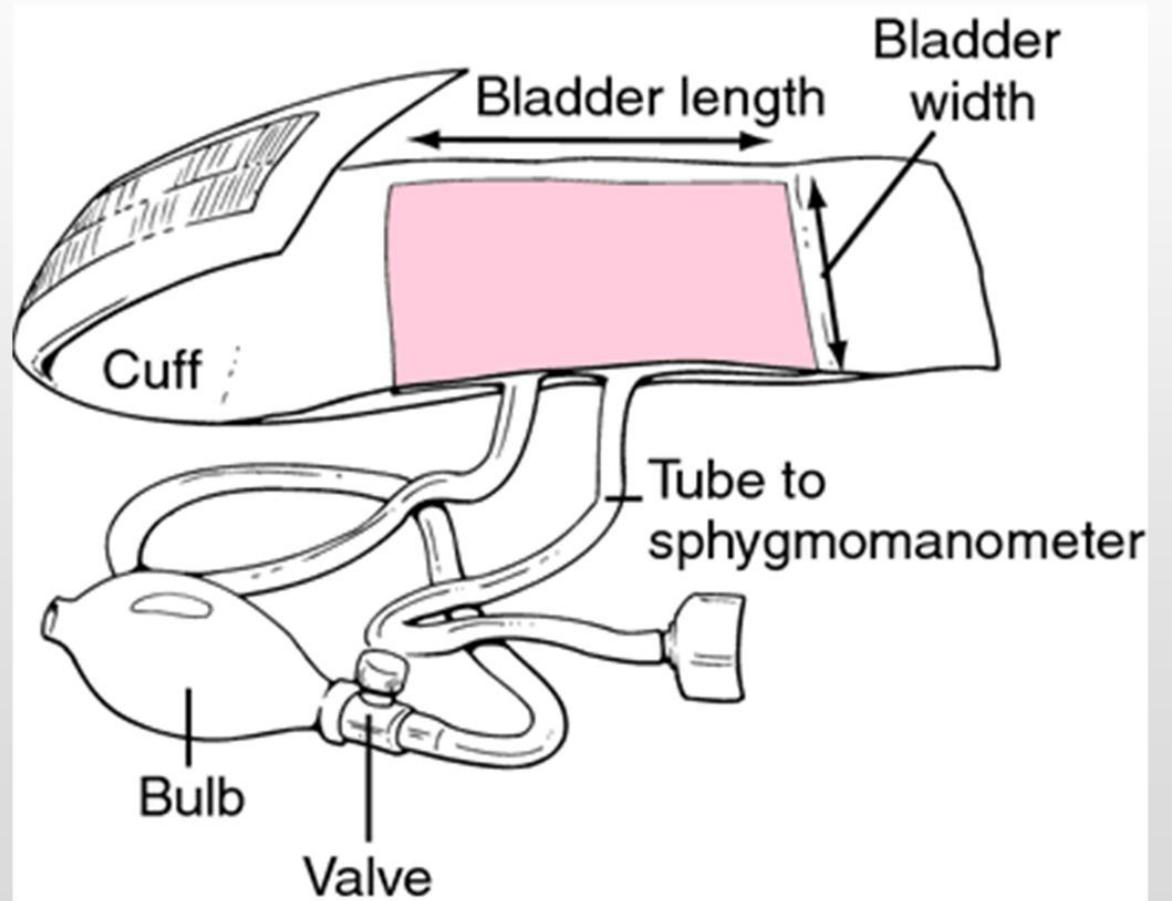
**Practice with each other**

# Manual cuffs

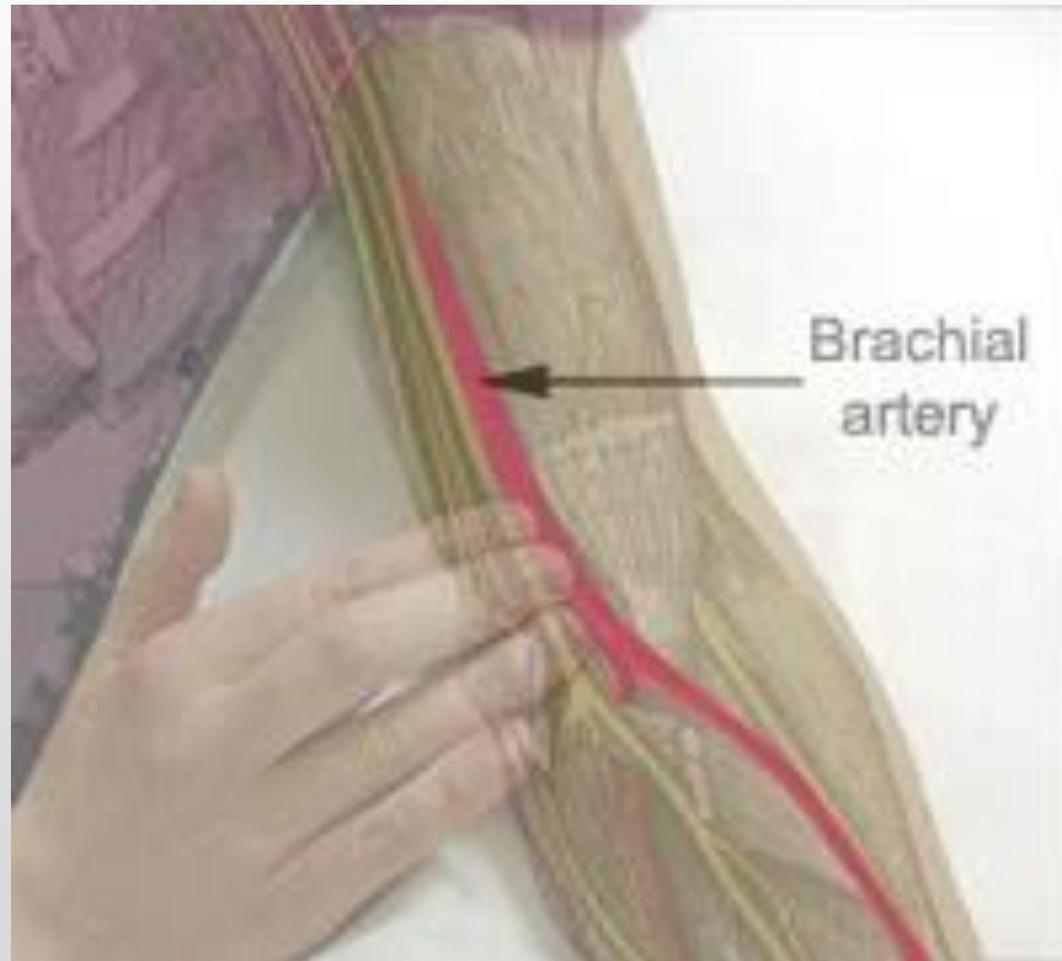


# Manual cuff

- Turn valve all the way to the right
- Squeeze bulb to inflate
- (Roughly to 180 – the lazy way)
- Turn knob **SLOWLY** to the left
- Needle moves 1-2 mmHg per second



# Locate pulse of brachial artery



# Stethoscope

- Clean
- Earpieces toward your nose
- Not touching other things
- On skin (not clothes)
- Tap to test

# So many tubes, so few hands



- Dominant hand on valve
- Other hand holds down stethoscope over brachial pulse

# Listen

- Listen for the first heartbeat
- First consistent beat is systolic number
- Last consistent beat is diastolic number
- You might hear artifact

# Sites and Sounds

- [Video of blood pressure measurement](#)

# Trouble Shooting

- **If you hear nothing**
  - Wait one minute, re-take
  - Find a quieter environment
  - Feel for pulse with fingers to place stethoscope
  - Tap stethoscope to test
- **If you hear a pulse immediately:**
  - Take again, start at 20 points higher

# Practice with each other

## LA POSTURA

Para que la posición adoptada sea correcta, ésta debe permitir el reposo psicofísico.

El manguito debe colocarse a la altura del corazón y a uno o dos centímetros por encima del codo

Se debe apoyar bien la **espalda** sobre el respaldo

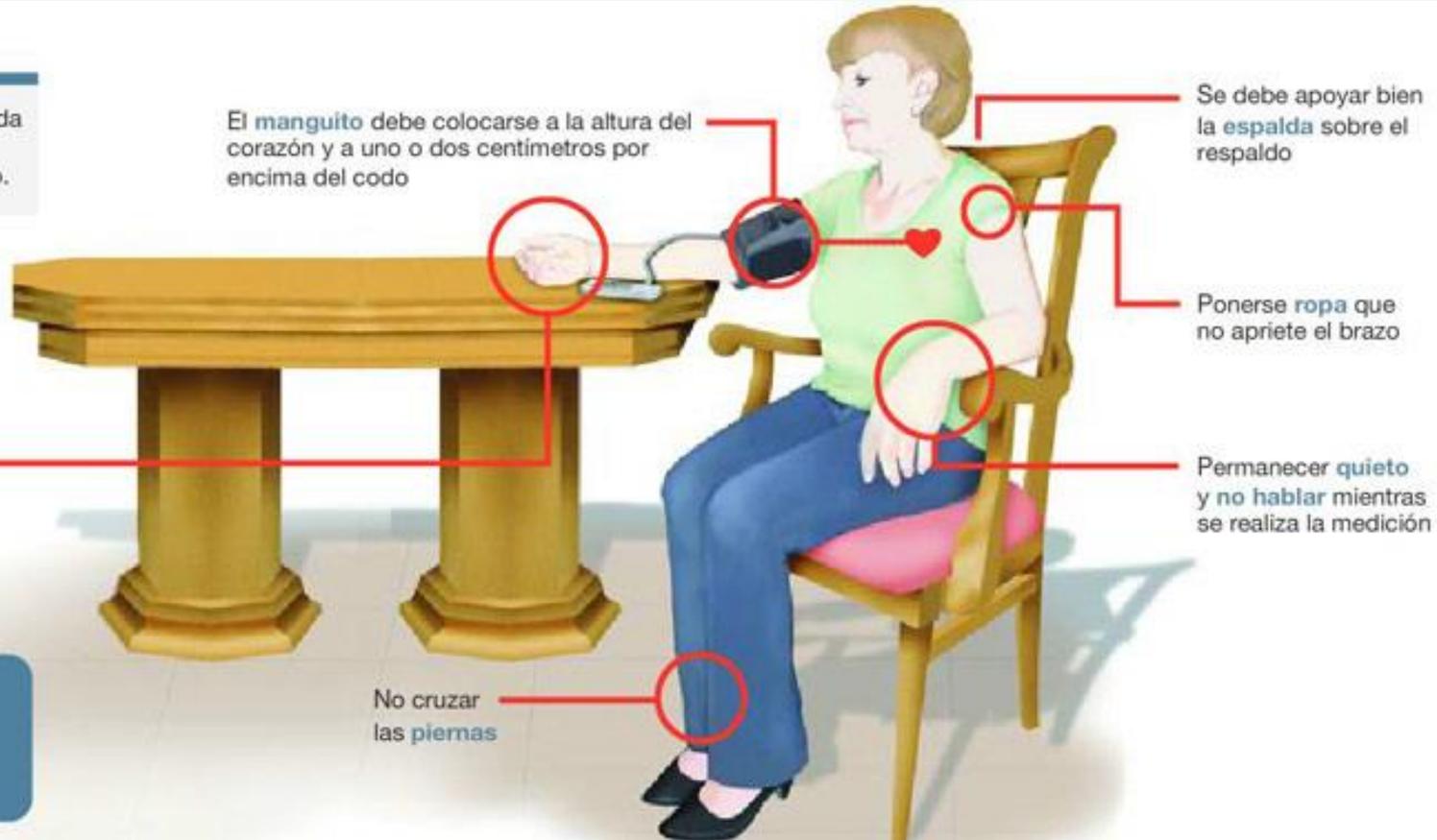
Ponerse **ropa** que no apriete el brazo

Permanecer **quieto** y no hablar mientras se realiza la medición

El brazo ha de reposar inmóvil sobre la mesa

Se recomienda **reposar sentado** al menos durante los 5 minutos previos a la medición.

No cruzar las piernas



# Counseling

- Maintain or reach a normal weight
- Eat less salt
- Drink less alcohol and caffeine
- Exercise (walk 20 mins)
- Quit smoking, avoid secondhand smoke
- Reduce stress
- DASH diet (more fruits, vegetables, lean proteins, whole grains)
- Take meds daily

# How much will lifestyle changes help?

## What's the **BIG DEAL** about controlling my blood pressure?

### Small changes make a **HUGE** difference:

Even one lifestyle change I make for my health . . .

can decrease my blood pressure by small amounts

and **small** decreases in blood pressure result in **huge** health benefits.

Walking 30 minutes, five days a week

can decrease blood pressure **10 points**

Losing 5–10 lbs. of weight

can decrease blood pressure **5 points**

Quitting tobacco (call 1-800-QUITNOW)

can decrease blood pressure **5–10 points**

Limiting sodium (salt) to 1,500 mg. per day

can decrease blood pressure **2–8 points**

**Every 5 points** decrease in blood pressure reduces

- ♦ risk of stroke by **34%**
- ♦ risk of heart attack by **21%**

**Every 3 points** decrease in blood pressure reduces

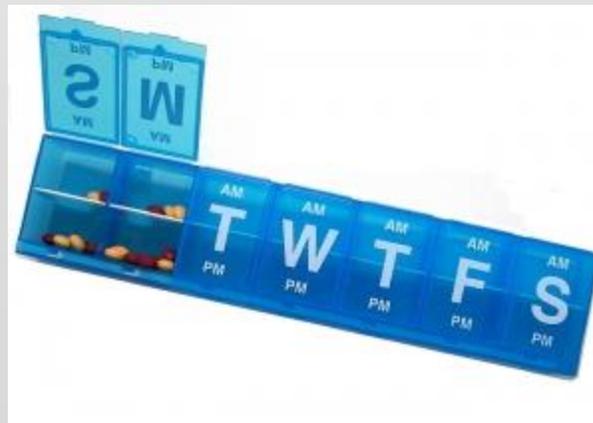
- ♦ risk of stroke by **8%**
- ♦ risk of heart attack by **5%**

# Do lifestyle changes matter?

- Healthy changes good for other reasons as well
- If BP is  $> 140/90$ , lifestyle changes are probably not sufficient without medication
- High BP usually requires medication

# Already diagnosed as hypertensive

- Most meds are taken once daily
- Never prescribed “as needed”
- Counsel patients to take meds at the same time every day
- Counsel them to get refills before running out
- Pill boxes really help with daily medication adherence!



# “I used to have high blood pressure”

- Hypertension rarely goes away
- BP meds are forever
- Hypertension usually gets worse with increased age
- Many people require more than one medication to control blood pressure

# My farmworker patient with hypertension feels fine and doesn't want to see a provider!

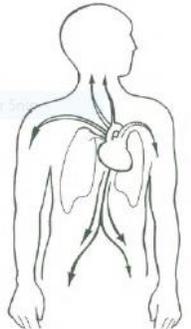
- Continue to visit and check blood pressure
- Have him borrow or buy a machine to check blood pressure daily
- Show him this video that you have downloaded prior to outreach
  - [The Take Control Two-Step; Managing Blood pressure in Spanish](https://www.youtube.com/watch?v=0uSobxdgeqA)
    - <https://www.youtube.com/watch?v=0uSobxdgeqA>
- Leave this handout with him (download and print from our website)

# Patient Education Handouts

**PRESION SANGUINEA ALTA**

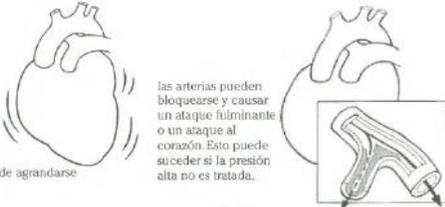
Todos tenemos presión sanguínea. La presión sanguínea se crea cuando el corazón bombea sangre por las arterias a todas las partes del cuerpo.

Algunas personas tienen presión sanguínea más alta de lo normal. La causa de la alta presión es desconocida.

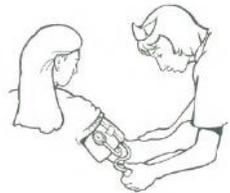


La presión alta significa que el corazón está trabajando más para bombear sangre. Esto no es sano porque:

- el corazón puede agrandarse
- las arterias pueden bloquearse y causar un ataque fulminante o un ataque al corazón. Esto puede suceder si la presión alta no es tratada.



La presión sanguínea alta normalmente no tiene síntomas. Muchas personas la tienen sin saberlo. La única forma de saberlo es chequeándose la presión sanguínea en la clínica o en un programa de exploración.

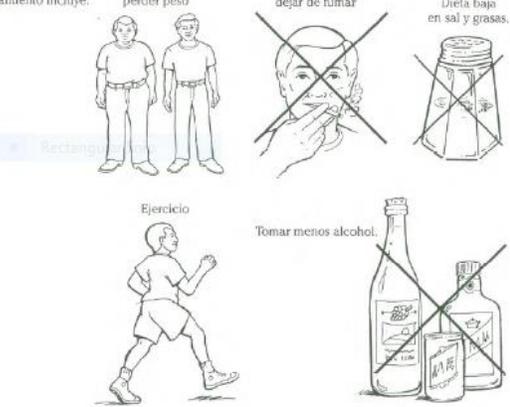


54.1 National Center for Farmworker Health, Inc.

**PRESION SANGUINEA ALTA**

La presión sanguínea alta puede ser controlada. El tratamiento incluye:

- perder peso
- dejar de fumar
- Dieta baja en sal y grasas.
- Ejercicio
- Tomar menos alcohol.



Su doctor puede decidir que usted necesita tomar medicina para controlar su presión sanguínea.

Recuerde:

1. Examine su presión sanguínea regularmente.
2. Tome su medicina como se la ordene su médico.
3. Si usted tiene presión sanguínea alta, siga las órdenes de su médico.

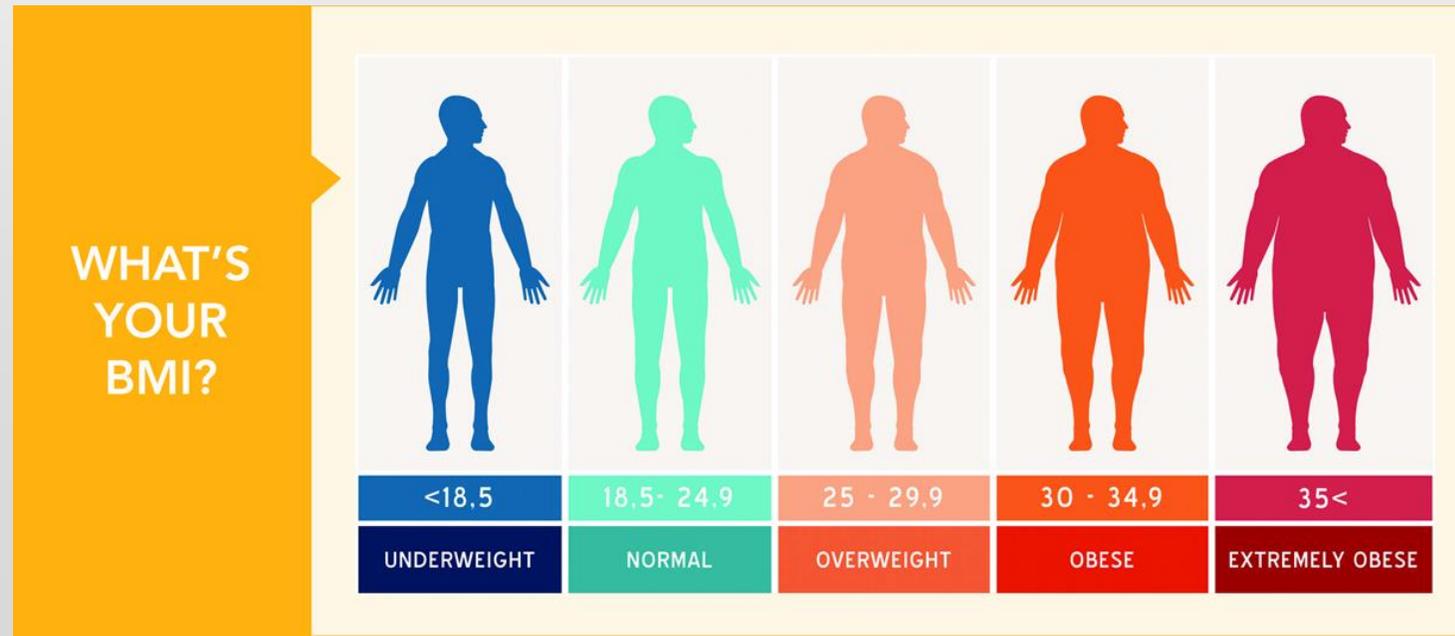


Usted y su médico deben trabajar juntos para mantener su presión sanguínea bajo control.

Patient Education Materials 54.2

# Body Mass Index (BMI)

- Incorporates height and weight. Need to remove shoes for accurate weight and height
- Currently used to define underweight, normal weight, overweight, obese and extreme obesity
- Required for a medical encounter
- Optional for outreach encounter



# How to Calculate BMI



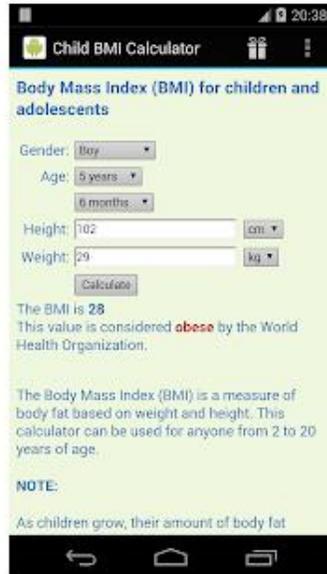
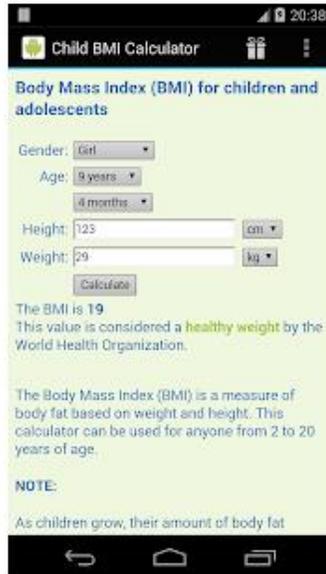
## Child BMI Calculator

Dragonfly Freeapps Health & Fitness

Mature 17+

Contains Ads

You don't have any devices.



## NIH BMI Calculator

National Heart Lung and Blood Institute (NHLBI)  
Health & Fitness

★★★★☆ 159

Everyone

Rectangular Snip

You don't have any devices.



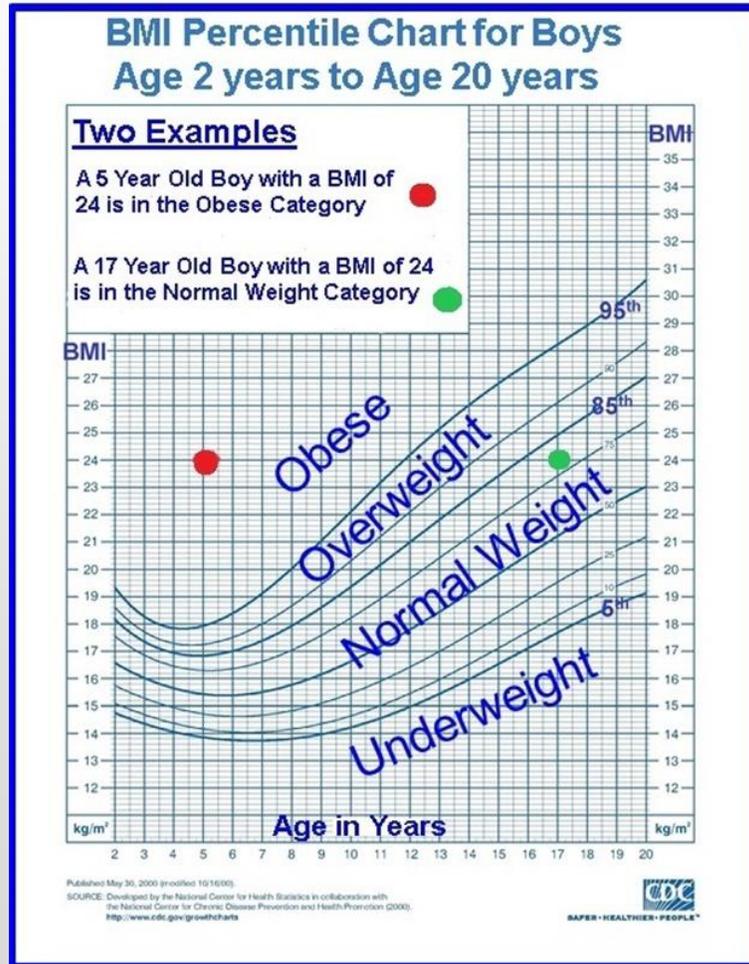
# How to Calculate for adults if no internet access

- Paper Chart

BMI HEIGHT	NORMAL						OVERWEIGHT					OBESE									EXTREME OBESITY															
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186	191	196	201	205	210	215	220	224	229	234	239	244	248	253	258
4'11"	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267
5'0"	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276
5'1"	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285
5'2"	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220	225	231	237	242	248	254	259	265	270	278	282	287	293	299	304
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324
5'6"	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334
5'7"	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344
5'8"	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354
5'9"	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365
5'10"	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376
5'11"	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386
6'0"	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397
6'1"	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408
6'2"	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420
6'3"	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431
6'4"	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443

Source: Adapted from Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report

# Pediatric BMI without internet



- Requires an extra step
- Incorporates gender and age

# What is a normal BMI?

- **For adults**
  - >30 is obese
  - 25-30 is overweight
  - 16-24 is normal
  - <16 is underweight
- **For children up to 13 yo**
  - >95% is obese
  - 85-95% is overweight
  - 6-84% is normal weight
  - <6% is underweight